

Acknowledgements

The author would like to express my sincere thanks to persons who helped and advised me in this thesis. My kind advisor, Dr. Warawut Tiyaongpattana, who is the first person I would like to express my grateful gratitude. My thesis could not have been completed without his invaluable guidance and encouragement. He also taught and shared the experience and a point of view of the life. No words and no things can be replaced and cannot enough for his kindness, except it will be kept in my mind and my memory forever. My grateful gratitude is also expressed to my co-advisor, Asst. Prof. Dr. Napaporn Youngsis, who the first advisor of bachelor degree of science in chemistry. She gave me kindness, opportunity, encouragement and valuable comment. She will be kept in my mind forever too.

My gratitude is expressed to Assoc. Prof. Dr. Prapin Wilairat for his useful guidance about the chromatography mass spectrometry. I would also like to thank him about the external examiner for suggestion and criticism.

I am grateful to Asst. Prof. Dr. Nattawan Kuppithayanant for supporting of some cosmetic samples which the products made from Rajamangala University of Technology Thanyaburi, Pathum Thani. I am also grateful to Asst. Prof. Dr. Napaporn Youngsis and Asst. Prof. Dr. Jirada Singkhonrat for collecting of water and soil samples from Chiang Mai.

I would like to express my sincere thanks to Assoc. Prof. Dr. Laddawan Chunchatprasert for helping in instrumentation of ion-trap mass spectrometer.

My gratitude is extended to Department of Chemistry, Faculty of Science and technology, Thammasat University for supporting all instruments used in the method.

Finally, my sincere gratitude is given to my family (including father, mother and brother) who are the most important persons in my life for their help, understanding and encouragement. I would also like to thanks all friends for help.

Thanatcha Chaida
Thammasat University
June 2011